

WALT: conduct an investigation.

Science

Electricity

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Aim

- I can conduct an investigation.
- I can record my data and report my findings.

Success Criteria

- I can use my plan to conduct an investigation.
- I can decide how to record my findings as data.
- I can decide how to report my findings appropriately.

Remind yourselves of your plan...



Question:

Does wire length affect how components in a circuit work?

Prediction:

I predict _____

Independent Variable:

I am going to change _____

Dependent Variable:

This will effect _____

Controlled Variable:

I am going to keep the same _____

Remind yourselves of your plan...



Equipment:

The equipment that I need is:

*
*
*

Method:

1)
2)
3)

Degree of Trust

Scientists conduct lots of investigations which have a big impact on living things. For example, scientists conduct investigations that tell us what type of food humans should eat and what chemicals are safe to use on plants.



Because we act on scientific data, we need to make sure that we have a high degree of trust in it before making our conclusions. This is particularly true if we are going to recommend that others act or behave in a particular way based on our results.

How can we ensure there is a high degree of trust in our results?

Degree of Trust



Be Objective: Have you reported the results honestly? Have you included all the results even when they did not match your prediction? Did you have a control group?

Accuracy: Was your measuring equipment accurate?

Reproducibility: Can your investigation be repeated? Have you repeated your results? Did you get the same or very similar results?

Consensus: This does not mean that all the data has to show the exact same results, but if the majority of other investigations show results that are the same or very similar then we can have a higher degree of trust in our results. If your results are completely different to all the other data sets for similar investigations, then it is necessary to consider why that is.

Sample Size: this is how many were included in your investigation. The more data you have the more likely it is to show the 'real' picture.

Which of these should you bear in mind while conducting your investigation?
What will you do to ensure you can have a high degree of trust in your results?

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Table of results...

Have a think about what table of results you are going to need for your investigation. Draw a table of results on a scrap piece of paper first but ensure you have all of the information required on it that you need.

It may look something like this:

	Length of wire 1	Length of wire 2	Length of wire 3
Brightness of Bulb – Test 1			
Brightness of Bulb – Test 2			
Brightness of Bulb – Test 3			

Investigate!

Table of Results:

*Carry out your investigation by watching the second video!

Was my prediction correct?

My prediction was correct/incorrect because _____.

Conclusion:

From my investigation, I conclude that _____.

Investigate!

What would you do differently next time?

If I were to do this investigation again, I would change _____.

How did you establish a high degree of trust in your investigation?

A high degree of trust was established because _____.

Electricity Quiz!!!

<https://www.educationquizzes.com/ks2/science/electrical-circuits/>